ZyXEL

Reliable Transceiver Modules for Different Connectivity Demands

- **Hot-Pluggable with maximum flexibility**
- **Low power dissipation**
- **Industry standard compliance**
- **SFP Multi-Source Agreement (MSA) compliance**
- **Compact size, high port density**

The ZyXEL Transceiver Series is a complete range of industry standard, hot-pluggable transceiver modules consists of Fast, Gigabit and 10 Gigabit variations.

Benefits

Standard-based design assures compatibility

The ZyXEL transceiver family follows industry standards to assure compatibility with switches from other manufacturers without barrier set by proprietary technologies.

Comprehensive portfolio for different connectivity demands

With ZyXEL's comprehensive Fast, Gigabit and 10 Gigabit transceiver product range, also Direct Attached Cable 1 M/3 M, users can just plug the proper model onto the network to extend the physical coverage.

Hot-swappable design facilitates network maintenance

Independent transceiver design provides the highest network maintenance flexibility. Transceivers can be freely added when required, and infrastructure upgrades or transceiver repairs can be done easily by just replacing the transceiver instead of the whole device.

Bi-directional transceivers maximizes usage of existing fiber plant

Traditional fiber optic networking requires two strands of fiber to accomplish communications, in which one strand is reserved for sending signals, while the other is for receiving. On the other hand, bi-directional, dual-wavelength transceivers can establish communications over just one strand of fiber by using two separate optical wavelengths: one receives and the other transmits signals. Transmission capacity can be expanded immediately without additional cost laying new fiber.

Supporting Digital Diagnostics Monitoring Interface (DDMI) SFP enhances management capability

The enhanced digital interface enables a real time link to be established between the switch and the SFP transceiver. This enables the switch to access operating parameters within the fiber link. This includes digital features such as soft control and monitoring of SFP I/O signals.

In addition, the DDMI functionality enables the capability to implement digital alarms and warnings.

This feature ensures that the business can be proactive in preventative maintenance of the network and ensure business continuity.

DDMI Monitors:

- Temperature
- Supply voltage
- Transmitted bias current
- Transmitted power
- Received power

All features listed above include alarm and warning thresholds.

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Fiber Transceiver Accessories

Specifications and Features

10GbE Transceiver Modules	10 Gigabit XFP		10 Gigabit SFP+	
	FTLX8511D3 (XFP-SR)	FTLX1412D3BCL (XFP-LR)	SFP10G-SR	SFP10G-LR
Connector	LC	LC	Duplex LC	Duplex LC
Wavelength	850 nm	1310 nm	850 nm	1310 nm
Max Transmission Distance	300 m	10 km	300 m	10 km
Receiver Characteristics				
Optical receiver sensibility	-11.1 dBm	-12.6 dBm	-11.1 dBm	-12.6 dBm
Maximum input power	+0.5 dBm	+0.5 dBm	0.5 dBm	0.5 dBm
Operational Ranges				
Supply voltage	3.1 - 3.45 V	3.1 - 3.5 V	3.14 - 3.46 V	3.14 - 3.46 V
Max current	400 mA	600 mA	250 mA	285 mA
Physical Specifications				
Dimensions (WxDxH)(mm/in.)	22.15 x 77.95 x 13.30/0.87 x 3.07 x 0.52		22.15 x 77.95 x 13.30/0.87 x 3.07 x 0.52	
Weight (g/lb.)	40/0.09	42/0.09	20/0.04	20/0.04
With DDMI Features	Yes	Yes	Yes	Yes

GbE/FE Transceiver Modules	Gigabit SFP							Fast Ethernet SFP				
	SFP-1000T	SFP-SX-D	SFP-LX-10-D	SFP-BX 1310-10-D	SFP-BX 1490-10-D	SFP-LHX 1310-40-D	SFP-ZX-80-D	SFP-100FX-2	SFP-100TX	SFP-100LX-20	SFP-100BX1310-20-D	SFP-100BX1550-20-D
Connector	RJ-45	LC	LC	LC	LC	LC	LC	LC	RJ-45	LC	LC	LC
Wavelength	-	850 nm	1310 nm	1310 nm (TX) 1490 nm (RX)	1490 nm (TX) 1310 nm (RX)	1310 nm	1550 nm	1310 nm	-	1310 nm	1310 nm (TX) 1550 nm (RX)	1550 nm (TX) 1310 nm (RX)
Max Transmission Distance	100 m	550 m	10 km	10 km	10 km	40 km	80 km	2 km	-	20 km	20 km	20 km
Receiver Characteristics												
Optical receiver sensibility	-	-17 dBm	-20 dBm	-20 dBm	-20 dBm	-23 dBm	-24 dBm	-32 dBm	-	-30 dBm	-34 dBm	-34 dBm
Maximum input power	-	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-3 dBm	-8 dBm	-	-5 dBm	0 dBm	0 dBm
Operational Ranges												
Supply voltage	3.1 - 3.45 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.45 V	3.1 - 3.5 V	3.1 - 3.5 V	3.1 - 3.5 V
Max current	300 mA	250 mA	300 mA	-	300 mA	300 mA	300 mA	250 mA	300 mA	250 mA	300 mA	300 mA
Physical Specifications												
Dimensions (WxDxH) (mm/in.)	13.40 x 56.00 x 12.40/0.53 x 2.20 x 0.49							13.40 x 56.00 x 12.40/0.53 x 2.20 x 0.49				
Weight (g/lb.)	24/0.05	24/0.05	16/0.04	17/0.04	17/0.04	17/0.04	18/0.04	17/0.04	21/0.05	30/0.07	15/0.03	15/0.03
With DDMI Features	-	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	Yes	Yes

Direct Attached Cable 10G Series	DAC10G	
	DAC10G-1M	DAC10G-3M
Connector	SFP+ to SFP+	SFP+ to SFP+
Max Transmission Distance	1 m	3 m
Operational Ranges		
Supply voltage	3.13 - 3.47 V	3.13 - 3.47 V
Max current	< 1.5 W	< 1.5 W
Physical Specifications		
Dimensions (WxDxH)(mm/in.)	14 x 58 x 11/0.55 x 2.30 x 0.43	
Weight (g/lb.)	85/0.19	164/0.36

Environmental Specifications

- Operating temperature: 0°C to 70°C (32°F to 158°F)
- Storage temperature: -40°C to 85°C (-40°F to 185°F)

Safety Certification

- Class 1 Laser
- 21 CFR 1040.10 and 1040.11 compliant
- CSA (10 Gigabit XFP, Gigabit SFP and Fast Ethernet SFP Series)
- TUV
- CE (10 Gigabit SFP+ Series, DAC10G Series)
- FDA (10 Gigabit SFP+ Series)

Supported Switches

		7000 Series	4700 Series		4500 Series		3900 Series	3700 Series				
		MS-7206	XGS4700-48F	XGS-4728F	XGS-4526	XGS-4528F	XS3900-48F	GS3700-24	GS3700-24HP	GS3700-48	GS3700-48HP	MES-3728
DAC10G	DAC10G-1M	-	-	-	-	-	Yes	-	-	-	-	-
	DAC10G-3M	-	-	-	-	-	Yes	-	-	-	-	-
10 Gigabit XFP	FTLX8511D3 (XFP-SR)	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
	FTLX1412D3BCL (XFP-LR)	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
10 Gigabit SFP+	SFP10G-SR	-	-	-	-	-	Yes	-	-	-	-	-
	SFP10G-LR	-	-	-	-	-	Yes	-	-	-	-	-
Gigabit SFP	SFP-1000T	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-SX-D	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-D	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-10-D	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-BX1490-10-D	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-LHX1310-40-D	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
	SFP-ZX-80-D	Yes	Yes	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
Fast Ethernet SFP	SFP-100FX-2	-	Yes	-	-	-	-	-	-	-	-	-
	SFP-100TX	-	Yes	-	-	-	-	-	-	-	-	-
	SFP-100LX-20	-	Yes	-	-	-	-	-	-	-	-	-
	SFP-100BX1310-20-D	-	Yes	-	-	-	-	-	-	-	-	-
	SFP-100BX1550-20-D	-	Yes	-	-	-	-	-	-	-	-	-

		3700 Series						3500 Series			3000 Series	
		MGS-3712	MGS-3712F	XGS3700-24	XG3700-24HP	XGS3700-48	XGS3700-48HP	ES3500-8PD	ES3500-24	ES3500-24HP	ES-3124 PWR	ES-3148
DAC10G	DAC10G-1M	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-
	DAC10G-3M	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-
10 Gigabit XFP	FTLX8511D3 (XFP-SR)	-	-	-	-	-	-	-	-	-	-	-
	FTLX1412D3BCL (XFP-LR)	-	-	-	-	-	-	-	-	-	-	-
10 Gigabit SFP+	SFP10G-SR	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-
	SFP10G-LR	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-
Gigabit SFP	SFP-1000T	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-SX-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1490-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LHX1310-40-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-ZX-80-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fast Ethernet SFP	SFP-100FX-2	-	-	-	-	-	-	Yes	Yes	Yes	-	-
	SFP-100TX	-	-	-	-	-	-	Yes	Yes	Yes	-	-
	SFP-100LX-20	-	-	-	-	-	-	Yes	Yes	Yes	-	-
	SFP-100BX1310-20-D	-	-	-	-	-	-	Yes	Yes	Yes	-	-
	SFP-100BX1550-20-D	-	-	-	-	-	-	Yes	Yes	Yes	-	-

Fiber Transceiver Accessories

		2200 Series					2000 Series		1910 Series					
		GS2200-8	GS2200-8HP	GS2200-24	GS2200-24P	GS2200-48	ES-2024 PWR	ES-2108 PWR	GS1910-24	GS1910-24HP	GS1910-48	GS1910-48HP	XGS1910-24	XGS1910-48
DAC10G	DAC10G-1M	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
	DAC10G-3M	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
10 Gigabit XFP	FTLX8511D3 (XFP-SR)	-	-	-	-	-	-	-	-	-	-	-	-	-
	FTLX1412D3BCL (XFP-LR)	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Gigabit SFP+	SFP10G-SR	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
	SFP10G-LR	-	-	-	-	-	-	-	-	-	-	-	Yes	Yes
Gigabit SFP	SFP-1000T	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-SX-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LX-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1310-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-BX1490-10-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-LHX1310-40-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SFP-ZX-80-D	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fast Ethernet SFP	SFP-100FX-2	Yes	Yes	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-
	SFP-100TX	Yes	Yes	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-
	SFP-100LX-20	Yes	Yes	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-
	SFP-100BX1310-20-D	Yes	Yes	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-
	SFP-100BX1550-20-D	Yes	Yes	-	-	-	-	-	Yes	Yes	Yes	Yes	-	-

		1100 Series									
		ES1100-8P	ES1100-16P	ES1100-16	ES1100-24E	ES1100-24	ES1100-24G	GS1100-8HP	GS1100-16	GS1100-24	GS1100-24E
DAC10G	DAC10G-1M	-	-	-	-	-	-	-	-	-	-
	DAC10G-3M	-	-	-	-	-	-	-	-	-	-
10 Gigabit XFP	FTLX8511D3 (XFP-SR)	-	-	-	-	-	-	-	-	-	-
	FTLX1412D3BCL (XFP-LR)	-	-	-	-	-	-	-	-	-	-
10 Gigabit SFP+	SFP10G-SR	-	-	-	-	-	-	-	-	-	-
	SFP10G-LR	-	-	-	-	-	-	-	-	-	-
Gigabit SFP	SFP-1000T	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-SX-D	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-LX-10-D	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-BX1310-10-D	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-BX1490-10-D	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-LHX1310-40-D	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-ZX-80-D	-	-	-	-	-	Yes	-	-	Yes	-
Fast Ethernet SFP	SFP-100FX-2	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-100TX	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-100LX-20	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-100BX1310-20-D	-	-	-	-	-	Yes	-	-	Yes	-
	SFP-100BX1550-20-D	-	-	-	-	-	Yes	-	-	Yes	-

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